CONGESTION AVOIDANCE PROFILES IN A PACKET SWITCHING SYSTEM

ABSTRACT OF THE DISCLOSURE

5   Methods and apparatus for an improvement on Random Early Detection (RED) router congestion avoidance are disclosed. A traffic conditioner stores a drop probability profile as a collection of configurable profile segments. A multi-stage comparator compares an average queue size (AQS) for a packet queue to the segments, and determines which segment the AQS lies within. This segment is keyed to a corresponding drop probability, which is used to

10   make a packet discard/admit decision for a packet.

In a preferred implementation, this computational core is surrounded by a set of registers, allowing it to serve multiple packet queues and packets with different discard priorities. Each queue and discard priority can be keyed to a drop probability profile selected from a pool of such profiles. This provides a highly-configurable, inexpensive, and fast RED

15   solution for a high-performance router.